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Earth Resources Experiment Package (EREP)
Progress Report #3 - 23 January 1974
Investigation #089
New England Reservoir Management

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The manned command and service module (CSM) designated SL-4 docked with the Saturn orbital workshop (SL-1) on 16 November 1973 for the third Skylab mission scheduled for 84 days. During the months of November and December unfavorable cloud conditions and low sun angles prevented EREP coverage of New England. An EREP pass along ground track 15 was cancelled on 13 January at the last moment due to unfavorable cloud cover conditions but on 14 January data was obtained on ground track 29 over our test area. In conjunction with this pass, an aerial underflight mission at 4,000 feet was accomplished by CRREL personnel utilizing a 9-inch camera with a 6-inch lens and +X2402 film. A NASA RB 57 underflight mission is also expected to be flown in the near future to augment the SL-4 imagery. The winter photography will be used to relate snow cover to the hydrologic characteristics of selected subbasins of the Connecticut and Merrimack Rivers.

Electronic screening of imagery prepared from SL-3 flight tapes of the S192 multispectral scanner has been reviewed and data requirements submitted to our technical monitor. Due to delays in data processing, it is now anticipated that the Skylab-3 imagery will not be received until February. At that time a comparison of S192, S190A/B, ERTS, aircraft imagery and ground truth data will be made to determine the appropriate type and scale of imagery for monitoring the extent of floods and for land use and vegetation mapping in the Merrimack River basin. Color IR and color positive

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imagery were received from the RB57 underflight mission 248 flown on 26 September 1973. A preliminary flood plain map of the lower Merrimack River basin is being compiled from this photography and will be used to determine the influence of vegetation patterns and land use on basin runoff characteristics.

Our milestone chart has been revised, as of 1 January 1974. The changes result from the delay in obtaining imagery caused by processing difficulties at the NASA Houston facility.

